

含有尼美舒利固体分散体的速释微丸的制备及性质考察

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摘要

目的 制备含有尼美舒利固体分散体的速释微丸制剂,并探讨其释药特征。方法 采用熔融法将尼美舒利与PEG6000混合制备固体分散体,用差示热扫描(DSC)与扫描电子显微镜(SEM)对药物固体分散体进行表征,研究药物在载体中的存在状态;并以固体分散体为原料,用挤出-滚圆技术制备速释微丸,同时考察常用辅料对微丸释药的影响,通过对微丸的平面临界角、堆密度、及脆碎度等粉体学性质和表观形态评价微丸的质量。结果 所制备的微丸平面临界角为13.2°、堆密度为0.85 g·mL⁻¹、产率为80.6%及脆碎度为0.67%,药物迅速释放效果良好。结论 以尼美舒利固体分散体为药物所制备的速释微丸收率高、圆整度好、硬度适宜,并且能显著改善尼美舒利的体外溶出特征。

关键词 [药剂学](#) [速释微丸](#) [挤出滚圆](#) [尼美舒利](#) [固体分散体](#)

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Preparation and characterization of nimesulide immediate-release pellets containing solid dispersions

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Abstract

Objective To prepare nimesulide immediate-release pellets containing solid dispersions, and characterize drug dissolution property. Methods Nimesulide solid dispersion, which was prepared by hot melting method using PEG6000 as the carrier, was characterized by differential scanning calorimetry (DSC) and scanning electron microscopy (SEM). Subsequently, nimesulide immediate-released pellets were prepared by extrusion-spheronization technology using the solid dispersion. The dissolution of nimesulide from the pellets was determined with paddle method. Results The nimesulide immediate-released pellets had good quality with high yield. Conclusion Dissolution of nimesulide from immediate-released pellets is increased by incorporating solid dispersions.

Key words [pharmaceutics](#) [immediate-released pellet](#) [extrusion-spheronization](#) [nimesulide](#) [solid dispersion](#)

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